2/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0107590

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A THEORY IS GIVEN OF EFFECTIVE DIPOLE DIPOLE INTERACTIONS BETWEEN TWO IDENTICAL SUBSTITUTIONAL GUEST MOLECULES AT LARGE INTERMOLECULAR DISTANCE. AN INTERACTION THEORY FOR INTERSTITIAL IMPURITY MOLECULES WAS DEVELOPED IN (3). A TWO LEVEL SCHEME FOR THE GUEST AND HOST MOLECULES IS ASSUMED. LOCAL FIELD CORRECTIONS ARE DISCUSSED. IT IS SHOWN THAT THE DIPOLE DIPOLE INTERACTION OF THE GUEST MOLECULES IN A CRYSTAL IS THE INTERACTION OF THE EFFECTIVE DIPOLE MOMENTS. THE VALUES OF SUCH EFFECTIVE DIPOLE MOMENTS DIFFER FROM THEIR VALUES IN VACUUM BY A FACTOR WHICH IS EXPRESSED BOTH BY THE DIELECTRIC CONSTANT AT THE IMPURITY TRANSITION FREQUENCY AND THE MICROSCOPIC CHARACTERISTICS OF THE MEDIUM.

FACILITY: INSTITUTE OF PHYSICS AND ENERGETICS, OBNINSK.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--DIFFUSION CONTROL OF CHAIN TERMINATION AND MOLECULAR WEIGHT DISTRIBUTION IN RADICAL POLYMERIZATION -U-

AUTHOR-(04)-KOZLOV, S.V., KAMENOMOSTSKAYA, S.L., OVCHINNIKOV, A.A., YENIKOLOPYAN, N.S.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(5), 1063-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--REACTION KINETICS, RADICAL POLYMERIZATION, MOLECULAR WEIGHT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/1871 STEP NO--UR/0020/70/191/005/1063/1065

CIRC ACCESSION NO--AT0132133

UNCLASSIFIED

2/2 015 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0132133

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MATH. RELATIONS ARE DEVELOPED TO EXPRESS THE DEPENDENCE OF CHAIN TERMINATION KINETICS AND MOL. WT. DISTRIBUTION ON DIFFUSION CONTROL IN RADICAL POLYMN. FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 547.869+546.185

SIMOV, D., KIRILOV, M., KAMENOV, L., PETROV, G., Sofia University, Bulgaria

"Phosphorusorganic Derivatives of Phenothiazine and N-Alkylphenothiazine Dioxide"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70, pp 2131-2132

Abstract: Reaction of phosphorus oxychloride with phenothiazine at 160° for 10-12 hrs gave N-(dichlorophosphoryl)-phenothiazine, m.p. 145-146°. When N-(2,3-dibromoisobutyl)-phenothiazine dioxide was reacted with triethylphosphite by heating a 1:2 mixture of these reagents to 160° for 4 hrs, N-(2,3-diethylphosphonylisobutyl) phenothiazine dioxide, m.p. 149°, was obtained. Reaction of N-(2-chloro-3-iodopropyl)-phenothiazine dioxide with triethylphosphite gave only N-allylphenothiazine dioxide.

1/1

USSR

UDC 616.988.73-022.39:598.4

KAMENOV, Ye. K., NIKOLOV, Z. V., NEDELCHEVA, S. B., KATEVA-STOYEVA, Yel. V., NEDELCHEVA, N. P., PASKALEVA, M. G., DENCHEV, St. I., and TURLAKOV, I. G., Chair of Epidemiology, Institute for Specialization and Advanced Training of Physicians, Republic Antiepidemic Station, and Zoological Institute and Museum of the Bulgarian Academy of Sciences, Sofia, Bulgaria

"Aquatic and Swamp Birds -- Carriers of Agents of Infectious Diseases. Communication I: Ornithosis"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 71, pp 437-441

Abstract: Since Bulgaria lies along one important flight route of migrant aquatic and swamp fowl, a serological investigation was performed on 350 wild birds caught along Bulgaria's Black Sea shore and Danube River. Specific antibodies against ornithosis were found in specimens belonging to the orders Ardiiformes, Podicipidiformes, Lariformes, Ralliformes, and Charadriiformes. In some areas densely populated by wild ducks, antibodies against ornithosis virus were found in 21.8% of wild ducks, in 44.7% of domestic ducks on neighboring farms, and in 54.5% of people. These findings support the previously advanced hypothesis that migrating aquatic and swamp birds play an important role in the epidemiology ornithosis in natural foci and in the transmission of this disease to domestic fowl and to humans.

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USSR UDC: 8.74

KAMENSHCHIKOV, L. P.

"On Computer Modeling of an Evolutionary Process"

V sb. Probl. kibernetiki (Problems of Cybernetics--collection of works), vyp. 25, Moscow, "Nauka", 1972, pp 63-75 (from RZh-Kibernetika, No 6, Jun 72, Abstract No 6V593)

Translation: The paper deals with the problem of mechanisms of the origin of species, specifically the sympatric divergence of a population with various methods of selection. Author's abstract.

1/1

USSR UDC 621.762.002.5(088.8)

MEL'NIKOV, V. N., TRET'YAKOV, V. I., YEMEL'YANOVA, M. D., MUKHAMEDZHANOV, A. K., KAMENSKAYA, D. S., MORGUN, G. N., CHAVRIKOV, M. G., and GRACHEV, Yu. S.

"Rotating Electrical Furnace for Production of Metallic Powders"

USSR Author's Certificate No 267823, Filed 23/06/66, Published 23/07/70 (Translated from Referativnyy Zhurnal-Metallurgiya, No 2, 1971, Abstract No 2 G477 P)

Translation: The furnace includes a hopper, loading and unloading chambers with worms, a body, rotating tube, and a device for removal of the layer of powder accumulating on the surface of the tube. In order to increase productivity of the process and improve working conditions, the device for removal of the powder layer from the surface of the tube is firmly fastened in the working space of the tube so that its leading edge is located parallel to its axis and its working face is at an angle to the radius. The device is attached to parts of the loading and unloading chambers.

1/1

USSR

UDC 612.816

KAMENSKAYA, M. A., Chair of Human and Animal Physiology, Soil Biology Faculty, Moscow State University

"Modern Ideas on the Mechanism of Quantal Transmitter Release From Motor Nerve Terminals of Skeletal Muscle"

Moscow, Uspekhi Fiziologicheskikh Nauk, No 3, 1972, pp 22-63

Abstract: Present-day thinking on the mechanism of acetylcholine release from motor nerve terminals is based on the assumption that the transmitter is released in very small increments or quanta in response to nerve impulses. Acetylcholine is contained in synaptic vesicles situated near the presynaptic membrane. Quanta of the compound are secreted spontaneously in the absence of nerve impulses. The number of quanta released by nerve impulses can be determined from the formula $m = Pn$, where m is the quantal composition of end-plate potential, P is the mean probability of release of a quantum, and n is the supply of acetylcholine available for immediate release. The probability of transmitter release at the mammalian neuromuscular junction is determined by two main factors: level of membrane potential of the nerve endings and concentration of calcium ions in the external medium. The probability is much greater with induced than spontaneous release. The nature

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002201210011-1"

USSR

KAMENSKAYA, M. A., Uspekhi Fiziologicheskikh Nauk, No 3, 1972, pp 22-63

of the postactivation processes in a nerve ending is affected by the relationship between two phenomena, facilitation and depression of transmitter output. Both are dependent primarily on the number of transmitter quanta released, while the amount of each quantum is relatively constant.

2/2

USSR

UDC: 669.14.018.44:620.17

LANSKAYA, K. A., and KAMENSKAYA, N. I., Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin

"The Effect of Thermomechanical Treatment on the Heat-Resisting Properties of the 1Kh14N18V2B Grade of Steel With Boron"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 6, 1973, pp 5-6

Abstract: The authors study the possibility of increasing the heat-resisting properties of the 1Kh14N18V2B grade of austenitic steel by thermomechanical treatment and by microalloying with boron. The results show that the thermomechanical treatment of the above grade of steel significantly increases its heat-resisting properties in comparison with austenization. At the same time, microalloying of the steel with boron also raises its heat-resisting properties. The heat-resisting properties of steel with boron increase more intensively after thermomechanical treatment than is the case for steel without boron. The heat-resisting properties obtained for steel with boron after thermomechanical treatment are more stable during a long service life under conditions of high temperatures and stress.

1/1

USSR

UDC 669.15--194.56:620.186.1-

LANSKAYA, K. A., KAMENSKAYA, N. I., FAYVILEVICH, G. A., and BUTNEVA, N. I., Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin

"The Effect of Boron on the Distribution and Quantity of Carbide Phases in Austenite Steel"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 10, 1972, pp 43-45

Abstract: Boron added in different amounts to 1Kh14N18V2B heat-resistant austenite steel influences the distribution, size, and quantity of NbC particles in the steel. Addition of 0.005, 0.017, and 0.1% B leads to coagulation of NbC particles and changes their shape from rodlike to spheroidal. When the concentration of B reaches 0.26% the coagulated NbC particles are dissolved and Nb becomes a part of the solid solution. The presence of 0.005, 0.017, and 0.26% B decreases the concentration of C from 69 to 28 atomic % and increases the concentration of Cr from 8 to 51 atomic %. This decreases the concentration of $M_{23}C_6$ in steel and increases the amount of Cr in borides. Evidently part of C in $M_{23}C_6$ becomes substituted with B. In addition to borides the boron forms a eutectic structure in this steel at high temperature (1300°C). The quantity and composition

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002201210011-1"

USSR

LANSKAYA, K. A., et al., Metallovedeniye i Termicheskaya Obrabotka Metallov, No 10, 1972, pp 43-45

of borides in the eutectic structure is determined by the concentration of boron. In the presence of 0.017% B the boride phase M_3B_2 is formed; when the concentration of B reaches 0.017-0.1%, M_3B_2 and M_2B are formed. The phase M_2B is formed when the concentration of B exceeds 0.1%. The eutectic structure in the steel under consideration consisted of a mixture of NbC and borides.

2/2

USSR

UDC 616.853-009.24-07:616.831-073.97

SEMENOV, S. F., and KAMENSKAYA, V. M., Moscow Scientific Research Institute of Psychiatry, Ministry of Health RSFSR

"A Clinical Electroencephalographic Study of the Influence of Emotional Stress on the Convulsive Tendency of Epileptics"

Moscow, Zhurnal Nevropatologii i Psikhiatrii imeni S. S. Korsakova, Vol 72, Vyp 2, 1972, pp 227-233

Abstract: One hundred epileptics were studied to determine the effect on convulsive tendency of mental and emotional stress, as a function of the location of the epileptogenic focus or foci. The histories of the patients included 32 of serious infection, 30 of trauma (11 at birth), seven of psychic trauma, and three of birth defects. For 28 patients the seizures were idiopathic. Each patient was studied between three and seven times, with photic and aural stimulation, as well as with having him listen to texts that were previously determined to have emotional content for him. Convulsive tendency was estimated from visual inspection of the EEG record. The results showed that the nature of the EEG reaction depended on the functional condition of the brain and on the location of the epileptogenic focus. Three groups were distinguished. In the first (37 patients having subcortical lesions) emotional stress was found to increase convulsive tendency, while

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SEMENOV, S. F., and KAMENSKAYA, V. M., Zhurnal Nevropatologii i Psikhiatrii imeni S. S. Korsakova, Vol 72, Vyp 2, 1972, pp 227-233

mental activity as well as light and sound stimulation at times suppressed it. In the second group (35 patients having cortical lesions -- 16 with temporal, 17 with frontal or fronto-parietal and two with occipital locations) a greater variety of reactions was noted. The convulsive activity of patients with a temporal focus was frequently increased by all of the stimuli used, but the response was very varied. The third group consisted of 28 patients with multiple cortical and subcortical foci and with varied clinical manifestations. These patients showed a variety of reactions, with basically an increase in the pathological activity.

It was concluded that the quality as well as the intensity of emotional factors may play a role in determining seizure tendency.

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USSR

KAMENSKIKH, V. A.

UDC: 8.74

"Algorithm for Construction of a Separating Function for Two Classes of Objects"

Uch. zap. Perm. un-t (Scientific Notes. Perm' University), 1971, No 259, pp 11-19 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V1079)

Translation: Two classes of objects are considered. It is assumed that a function F exists in the initial space, and that this function separates the set of objects into two classes. The function F* is constructed which gives values coincident with F on the instructional sequence. Author's abstract.

1/1

USSR

UDC 612.82:615.781

KIRZON, M. V., TITOV, S. A., and KAMENSKIY, A. A., Chair of Human and Animal Physiology

"Direct Effects of Novocain on the Cerebrum of White Rats"

Moscow, Vestnik Moskovskogo Universiteta, No 1, Jan/Feb 71, pp 98-99

Abstract: In an investigation of the effects of novocain on the cerebrum, small volumes of novocain (0.01 ml of 5-12% solutions) were injected into various brain structures (amygdaloid nucleus, substantia nigra, and caudate nucleus) in nonpremedicated white rats. The immediate results observed included: complete immobility, areflexia, fall in respiratory rate from the control 80 to 10 and fewer breaths per minute, and a marked depression of electroencephalographic waves. If the animal did not die from apnea in the first 5 minutes, it gradually recovered during the next hour. Since such a rapid diffusion of the novocain from the site of injection to the respiratory centers was improbable, the authors postulate activation of inhibitory neural reflexes.

1/1

USSR

UDC 547.245'118.07

KAMENSKIY, A. B., OGAYDZHAN, E. P., PONOMAREV, V. V., GOLUBTSOB, S. A., and IGNATOVICH, YU. A.

"A Method of Making Organyl Halosylyl Phosphines"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 22, Aug 72, Author's Certificate No 345167, Div C, filed 31 Jul 70, published 14 Jul 72, p 97

Translation: This Author's Certificate introduces a method of making organyl halyl phosphines by reacting hydrogen-containing halosilanes with chlorophosphines in an organic solvent with subsequent isolation of the goal product by conventional methods. As a distinguishing feature of the patent, the process is simplified by using organyl chlorophosphines as the chloride acceptor such as triethylamine.

1/1

USSR

UDC 678.84

KAMENSKIY, A. B., OGAYDZHAN, E. P., PONOMAREV, V. V., and GOLUBTSOV, S. A.

"A Method of Synthesizing Organophosphorus Compounds"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 36, 1971, Author's Certificate No 322346, Division C, filed 31 Jul 70, published 30 Nov 71, p 55

Translation: This Author's Certificate introduces: 1. A method of synthesizing organophosphorus compounds by interacting trichlorosilance with organophosphines. As a distinguishing feature of the patent, compounds containing the P-P bond in the main chain are synthesized by using organyldichlorophosphines as the organophosphines, and carrying out the reaction in the presence of a tertiary amine in an organic solvent. 2. A modification of this method distinguished by the fact that the tertiary amine is taken in quantities from catalytic to equimolecular.

1/1

USSR

UDC: 669.14.018.29:539.43:620.178.35

CHERKES, Z. A., KAMENSKIY, A. P., VOLOSKOV, N. V.

"Study of the Influence of Amplitude of Repeated Impact on the Strength of 40Kh Steel as a Function of Tempering Temperature"

Tekhnol. Mashinostroyeniya [Machine Building Technology -- Collection of Works], No 7, Tula, 1972, pp 69-73 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8I513, by V. Bochkareva).

Translation: Specimens of 40Kh steel were subjected to the following heat treatment: hardening (heating to 850 ± 15° in a Pb bath, cooling in oil); low temperature tempering (heating in a salt bath at 220 ± 10°, cooling in water) to produce "hard" specimens; high temperature tempering (heating in a saltpeter bath at 500 ± 10°, cooling in water) to produce "soft" specimens. It is shown that repeated high energy impacts greatly reduce the strength of the "soft" and "hard" specimens, while low energy impacts increase strength. It is established that the maximum number of impacts can be withstood by specimens of "soft" metal, which have hish plasticity and low hardness, followed by the steel as delivered rolled, then the "hard" specimens, and finally, the hardened specimens without tempering. 1 figure, 2 tables, 2 biblio. refs.

1/1

USSR

BITYUTSKIY, V. I.; KAMENSKIY, G. A. (Moscow)

"Evaluation of the Mean Time to Servo Failure in a Nonlinear, Pulsed Servo System with Irregular Signals"

Moscow, Avtomatika i Telemekhanika; June, 1972; pp 57-64

ABSTRACT: For nonlinear servo systems with discrete, irregular data input the authors obtain integral equations with a varying argument whose solution is the mean time to servo failure, the time depending on the initial value of the error in the system. The calculations allow for the effect of processes whereby the failure signals are detected or recognized. Methods of solving the initial and boundary value problems for the integral equations obtained are described, and existence and uniqueness theorems for their solution are discussed. An example is given.

1/1

USSR

UDC 621.373.531.2(088.8)

KAMENSKIY, I. V., KARTAVYKH, YU. V.

"Blocking Generator"

USSR Author's Certificate No 277835, Filed 8 Feb 69, Published 20 Oct 70 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4G228P)

Translation: A blocking generator is proposed. It contains a transformer, an auxiliary transistor in the start circuit, a commuting transistor, and a series impact excitation circuit. In order to stabilize the pulse length, the circuit is connected via a separating semiconductor diode to the collector of the blocking generator transistor, and the base of the commuting transistor the collector of which is connected to the base of the blocking generator transistor, is connected to the midpoint of the impact excitation circuit.

1/1

1/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ORGANOSILICONE RESINS -U-

AUTHOR-(03)-KAMENSKIY, I.V., KORSHAK, V.V., YAKIMOVICH, V.I.

COUNTRY OF INFO--USSR

SOURCE--USSR, 262,393
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--06JAN70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--SILICONE RESIN, THERMAL EFFECT, FURAN, ORGANIC SILANE,
CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1449 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128848
UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70
CIRC ACCESSION NO--AA0128848
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ORGANOSILICONE RESINS ARE PREPD. BY THERMAL RESINIFICATION OF DIETHOXYBIX(FURFURYLOXY)SILANE AT 240-60DEGREES, WITH DISTN. OF VOLATILE SUBSTANCES.

UNCLASSIFIED

1/2 030 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF CURING CONDITIONS ON THE MODULUS OF ELASTICITY OF FA RESIN -U-

AUTHOR-(02)-FRIDMAN, O.A., KAMENSKIY, I.V.

COUNTRY OF INFO--USSR

SOURCE--PLAST. MASSY 1970, (3), 30-2

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ELASTIC MODULUS, SHEAR MODULUS, PRESSURE EFFECT, THERMAL EFFECT, FURFURAL, ACETONE, PLASTIC FABRICATION/(U)FA FURFURAL ACETONE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0659 STEP NO--UR/0191/70/000/003/0030/0032

CIRC ACCESSION NO--AP0119567

UNCLASSIFIED

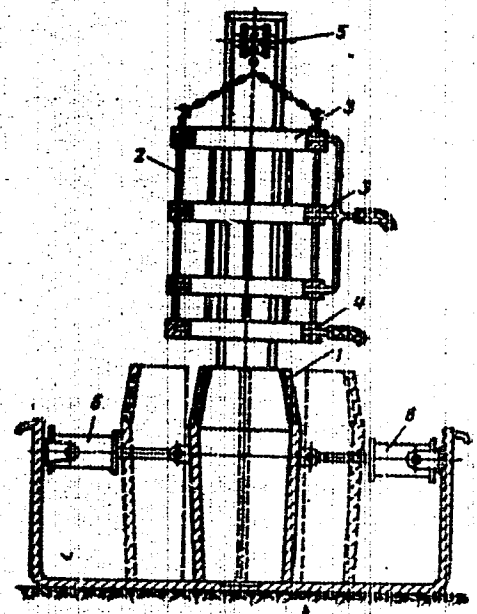
2/2 030 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119567

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF MOLDING CONDITIONS (PRESSURE LARGER THAN OR EQUAL TO 24,000 KG-CM PRIME2 AND TEMP. OF 120-200DEGREES), ON THE MODULUS OF ELASTICITY (E SUBT) AND SHEAR MODULUS (G) OF CURED FA RESIN WERE STUDIED. INCREASED MOLDING TEMP. GAVE HIGHER COKE NO. AND LOWER EXTRACTANT CONTENT. AT LOW PRESSURES (250 KG-CM) G AND E SUBT WERE INVERSELY PROPORITONAL TO TEMP.; CONVERSELY, AT HIGH PRESSURE (1600 KG-CM PRIME2), E SUBT AND G WERE PROPORTIONAL TO TEMP.

UNCLASSIFIED

AA0040748



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AD

19750427

Photoelectric Effect

USSR

UDC 621.383.52.029.6

GEORGIYEVSKAYA, Ye. A., ISTOMIN, A. N., KAMENSKIY, N. N., PRICHKO, Yu. V., FEDOTOV, Ya. A.

"High-Frequency Silicon Photodiodes With PIN-Junction Structure"

Moscow, Radiotekhnika i Elektronika, vol 16, No 11, Nov 71, pp 2232-2234

Abstract: Silicon photodiodes are described in which speed is increased at high inverse bias voltages by eliminating the diffusion time and reducing RC parameters. The diodes are made from high-resistance P-silicon (resistivity of 1 000-2 000 Ω·cm). Curves are given for the frequency response of the diodes for incident radiation on wavelengths of 0.63 and 0.91 μ at various supply voltages from 0 to 100 V. The spectral characteristics of the photodiode are given as well as a structural schematic. The proposed photodiodes can be used in high-quality optico-electronic equipment in combination with various radiation sources. Particularly promising is the use of these diodes in semiconductor devices in conjunction with gallium arsenide emitters. The authors thank M. Kh. Kollender for her assistance with preparation of the diodes. Two figures, bibliography of two titles.
1/1

USSR

UDC: 621.383.52

KAMENSKIY, N. N., PRICHKO, Yu. V., and SKIBARKO, A. P.

"Dependence of Photodiode Sensitivity and Inertia on the Dimensions and Position of a Light Spot on the Light-Sensitive Area"

Kiev, Izvestiya VUZ--Radioelektronika, Vol 14, No 1, 1971, pp 72-75

Abstract: The results of investigations into the possibility of increasing the sensitivity and rapidity of action of photosensitive diodes with the use of a focusing system are given. In general, the sensitivity and inertia of the diode depend on the thickness of the photosensitive base, the surface recombination rate at the illuminated point on the base, and the absorption factor for a particular optical wavelength. Since the diffusion length of the minority carriers is much larger than the base thickness, the space recombination can be neglected. A relief diagram of the sensitivity and inertia values at the central part of the base in a type 1690 photodiode is shown; the light used to obtain these results had a wavelength of 0.63 μ, the diameter of the light spot was about 50 μ, and the distance between the centers of the relief squares was 100 μ. Curves are plotted for diode characteristics as functions of light spot diameter.

1/1

USSR UDC 627.8.05.69.055:624.147

BIYANOV, G. F., (Engineer), KAZENSKIY, B. M., (Candidate of Technical Sciences), and PAVLENKO, YU. G., (Engineer)

"Ice Crossing for Heavy Loads Under Conditions of the Extreme North"

Moscow, Gidrotekhnicheskoye Stroitel'stvo, No 8, Aug 71, pp 45-48

Abstract: The organization and execution of an ice crossing of a river for transportation of heavy loads (power transformers) during construction of the Vilyuy river hydroelectric power plant are described. Calculations of the ice cover load carrying capacity were carried out by using the method of the theory of elasticity on the basis of data on systematical natural observations of the ice cover conditions, conducted by the Vilyuy Scientific Research Meteorological Station of the Institute of Geocryology of the Siberian Department of AN SSSR. Test conducted on an experimental crossing 100 m downstream from the main crossing confirmed the correctness and reliability of design methods for determining the admissible load for one-time transportation of heavy loads.

1/1

USSR

UDC: 538.1

KAMENSKIY, V., TIGANE, Anu, Institute of Theoretical Physics imeni L. D. Landau, Academy of Sciences of the USSR; Institute of Thermal Physics and Electrophysics, Academy of Sciences of the EstSSR

"Absorption of Light in Ferromagnetics Close to the Curie Point"

Tallin, Izvestiya Akademii Nauk EstSSR: Fizika, Matematika, Vol 22, No 2, 1973, pp 159-163

Abstract: A diagram technique for interacting spins proposed by V. G. Vaks, A. I. Larkin, and S. A. Pinkin is applied to determination of the variation, with frequency and temperature, of the permittivity in ferromagnetics close to the transition temperature. The procedure involves finding successive approximations of the self-consistent field. The results are used to determine the attenuation of light as a function of frequency and temperature. The results are compared with other theories.

1/1

USSR UDC: 550.837

KAMENSKIY, V. P., SAPOZHNIKOV, B. G., All-Union Scientific Research Institute of Exploratory Geophysics

"A Direct-Current Method of Geoelectric Prospecting"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 7, Mar 72, Author's Certificate No 329495, Division G, filed 16 Oct 70, published 9 Feb 72, p 183

Translation: This Author's Certificate introduces a direct-current method of geoelectric prospecting by measuring the difference in potentials of an electric field with subsequent elimination of the interference field. As a distinguishing feature of the patent, in order to automate elimination of interference, simplify equipment and process the recording, the potential difference is measured at three times separated by intervals of no more than one second. The first two measurements are made before the current is fed into the ground, and the third is made after introducing the current into the ground. The sought potential difference is determined from the measured values.

USSR

UDC 621.375.826

KAMENSKIY, Ye. I., KOZLOV, V. V.

"Lasers With Polyhedral Energy Guide"

Moscow, Kvantovaya Elektronika, Sbornik, Statey, No 4, "Sovetskoye Radio", 1971, pp 77-86

Abstract: New types of cavities are proposed for lasers and laser amplifiers -- energy guides in which the overall dimensions are kept small while providing a long path of interaction between the emission and the active material. The proposed design reduces overall dimensions, and improves the operational reliability and parameters of laser systems. A method is developed for designing the energy guides, examples are given to illustrate the design of such cavities, a description is given of a polyhedral energy guide made of neodymium glass, and the results of preliminary experiments are presented. It is shown that the new miniature laser cavity provides an active emission path up to 2.5 meters long while reducing the activation threshold, improving the mode structure and minimizing laser beam divergence. Cavities of the proposed type with concentric arrange-

USSR

KAMENSKIY, Ye. I., KOZLOV, V. V., Kvantovaya Elektronika, No 4, "Sov. Radio", 1971, pp 77-86

ment of flash tubes provide efficient utilization of optically stimulated emission, in addition to low electric thresholds. The long optical path improves transverse mode selectivity and provides peakless emission at energy levels exceeding the threshold pumping energy by a factor of 1.5. The improvement in transverse mode selectivity without adding optical equipment provides the possibility of stable emission on a single transverse mode and concentration of the emission energy in an angle close to the diffraction limit. In conclusion, the authors thank R. V. Khokhlov for constant interest in the work, and V. P. Vasil'yev, L. F. Pliyev, L. Ye. Rytikov and M. S. Belov for making the polyhedron for the model laser. Eight figures, bibliography of ten titles.

2/2

USSR

UDC 539.3

KAMENYARZH, Ya. A.

"Simple Waves and Disintegration of the Discontinuity in an Elastoplastic Medium With the Mises Condition"

Moscow, Prikladnaya Matematika i Mekhanika, No 2, 1972, pp 320-329

Abstract: Strong discontinuities, differing from elastic shock waves, can originate in elastoplastic media; this brings about the necessity for seeking additional conditions on shocks. It would be desirable to isolate media for which solutions can be constructed without the use of such discontinuities. It has been shown that with the Mises condition of plasticity and with isotropic strengthening, in the presence of two velocity components and some limitations upon the initial stressed state, simple plane waves do not overturn. This is valid for media with a stress-deformation diagram convex to the stress axis for an experiment on simple compression. In the present article, this statement is generalized for the case of arbitrary simple plane waves in the same medium. The solution of the problem of the disintegration of an arbitrary discontinuity is constructed with more rigorous conditions. In this case, no shocks exist except elastic shock waves, contact discontinuities, and shocks which are the limit case of simple waves propagating at constant velocity. 4 figures. 7 references.

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1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--LOW LYING ONE PHONON OPLUS LEVELS IN SPHERICAL NUCLEI -U-

AUTHOR--KAMERDZHIYEV, S.P.

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(3), 537-44

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--NUCLEAR MODEL, DEFORMED NUCLEUS, NUCLEAR ENERGY LEVEL, NUCLEON INTERACTION, PHONON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1051 STEP NO--UR/0367/70/011/003/0537/0544

CIRC ACCESSION NO--AP0110741

UNCLASSIFIED

2/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0110741

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONSEQUENCES OF EXCLUSION OF THE ZERO ENERGY "SPURIONS" STATE IN THE TOTAL SET OF EQUATIONS FOR THE THEORY OF FINITE FERMI SYSTEMS ARE STUDIED. THE RESULTS ARE VALID FOR BOTH SPHERICAL AND DEFOREMD NUCLEI. CALCNS. SHOW THAT SPHERICAL NUCLEI WITH THE DEVELOPED PAIRING MUST CONTAIN OPOSITIVE LEVELS WITH AN ENERGY NEAR 2 DELTA AND WITH A REDUCED PROBABILITY OF EO TRANSITIONS INTO THE GROUND STATE B(EO) IS SMALLER THAN 1 (IN 1 PARTICLE UNITS). ONLY 1 PHONON LEVELS ARE INVESTIGATED SINCE THESE LEVELS CAN NOT BE REFERRED TO THE KNOWN "2 PHONON" OPOSITIVE LEVELS. THE RELATIVE CONTRIBUTION OF THE EFFECTIVE PARTICLE HOLE AND PARTICLE PARTICLE INTERACTION RESPONSIBLE FOR THE APPEARANCE OF THESE LEVELS IS CONSIDERED. THE CALCD. LEVELS SHOULD BE EXCITED IN REACTIONS WITH 2 N TRANSFERS BUT THE PROBABILITY OF EXCITATION WILL BE DIFFERENT, SINCE, IN THESE REACTIONS, THE "INOCULATED" EXTERNAL FIELD DIFFERS FROM THE ONE USED IN THE CALCNS.

FACILITY: FIZ. ENERG. INST., MOSCOW, USSR.

UNCLASSIFIED

USSR

K

KAMERDZHIYEV, S. P. (Institute of Physics and Power Engineering)

"Low-Lying 'One-Phonon' 0^+ Levels in Spherical Nuclei"

Moscow, Journal of Nuclear Physics; March 1970, pp 537-44

ABSTRACT: The consequences of excluding the zero-energy "spurious" state in the total set of equations for the theory of finite Fermi systems (A. B. Migdal. "Theory of Finite Fermi Systems and Properties of Nuclei", "Nauka", 1965) are discussed. Direct calculations show that spherical nuclei with developed pairing must contain 0^+ levels with energy near 2Δ and with a given probability of EO-transitions into the ground state $B(EO)<1$ (in one-particle units). These levels cannot be referred to the well-known "two-phonon" 0^+ levels. Relative contribution of the effective particle-hole and particle-particle interaction responsible for the appearance of these levels is considered.

The article includes 14 equations. There are also two tables: Table 1 gives the calculated energies of the first two "one-phonon" 0^+ levels and given probabilities of EO-transitions to the ground state; Table 2 gives the effect of particle-hole and particle-particle interaction on the properties of the 0^+ levels.

There are 12 references.

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1/3 017 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--TRANSFORMED STEROIDS. 26. SYNTHESIS OF 16 ALPHA, 17 ALPHA DIHYDROXYPROGESTERONE AND SOME OF ITS DERIVATIVES -U-

AUTHOR-(04)-AKHREM, A.A., DUBROVSKIY, V.A., KAMERNITSKIY, A.V., PAVLOVAGRISHINA, N.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (4), 895-900

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PROGESTERONE, CHEMICAL SYNTHESIS, MOLECULAR STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0446 STEP NO--UR/0062/70/000/004/0895/0900

CIRC ACCESSION NO--AP0131084

UNCLASSIFIED

2/3 017 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131084

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KEEPING PREGN-5-ENE-3 BETA, 16 ALPHA, 17 ALPHA TRIOL-20 ONE 16 ACETATE 3 DAYS WITH CYCLOPENTANONE IN DIOXANE IN THE PRESENCE OF 70PERCENT HCLO SUB4 GAVE SIMILAR TO 60PERCENT 16 ALPHA, 17 ALPHA CYCLOPENTYLIDENEDIOXYPREGN 5 EN 3 BETA OL 20 ONE (IA), M. 211.5-12.5DEGREES. WITH CYCLOHEXANONE THE PRODUCT WAS THE CYCLOHEXYLIDENEDIOXY ANALOG, M. 189-91DEGREES, WHILE CYCLOHEPTANONE GAVE THE CYCLOHEPTYLIDENEDIOXY ANALOG, M. 185-7DEGREES. 16 ALPHA, 17 ALPHA EPOXYPROGESTERONE (I) AND ETO SUB2 CNHNH SUB2 IN ACOH DIOXANE GAVE THE 3,20 BIS(CARBETHOXYHYDRAZONE), DECOMPO. 300DEGREES, WHICH WITH PYRUVIC ACID IN ACOH AT 100DEGREES 20 MIN GAVE I. I TREATED WITH ETO SUB2 CNHNH SUB2 AS ABOVE 2 HR IN ACOH AT 85DEGREES, THEN TREATED WITH H SUB2 O, FOLLOWED TO ACOH AND AQ. PYRUVIC ACID AT 100DEGREES, GAVE 16 ALPHA ACETOXY 17 ALPHA HYDROXYPROGESTERONE, M. 172-4DEGREES, WHICH WITH AQ. MEOH-K SUB2 CO SUB3 IN 1 HR GAVE 16 ALPHA, 17 ALPHA DIHYDROXYPROGESTERONE, M. 204-10DEGREES, WHICH IN A QUARTZ TUBE HELD AT ITS M. P. 0.5 HR GAVE THE THERMAL ISOMERIZATION PRODUCT 17 ALPHA BETA METHYL D HOMOANDROST 4 ENE 16 ALPHA, 17 A ALPHA DIOL 3,17 DIONE (II), M. 188-92DEGREES. 16 ALPHA, 17 ALPHA ISOPROPYLIDENEDIOXYPREGN 5 EN 3 BETA OL 20 ONE OXIDIZED WITH CRO SUB3 IN ME SUB2 CO-H SUB2 SO SUB4 AT MINUS 10DEGREES GAVE 16 ALPHA, 17 ALPHA ISOPROPYLIDENEDIOXYPROGESTERONE, M. 209-11DEGREES.

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3/3 017 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131084

ABSTRACT/EXTRACT--IA AND AL (OCHME SUB2)SUB3 IN MEPH REFLUXED 4 HR IN THE PRESENCE OF CYCLOHEXANONE GAVE 16 ALPHA, 17 ALPHA CYCLOPENTYLIDENEDIOXYPROGESTERONE, M. 173-4DEGREES, ALSO FORMED FROM IA AND CRO SUB3 IN ME SUB2 CO-H SUB2 SO SUB4 AT MINUS 10DEGREES UNDER N, THEN HEATING THE PRODUCT WITH MEOH AND KOH. SIMILARLY WAS PREPD. THE 16 ALPHA, 17 ALPHA CYCLOHEXYLIDENEDIOXY ANALOG, M. 135-9DEGREES, AND THE CYCLOHEPTYLIDENE ANALOG, M. 148-9DEGREES. FACILITY: INST. ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.643.001.24

GEKEMAN, A.S., KAMERSHTEYN, A.G.

"The Seismic Resistance of Pipelines Should Be Reconsidered"

Moscow, Stroitel'stvo Trubuprovodov, No 5, May 1971, pp 34-36

Abstract: The planning of long-distance oil and gas pipelines, in regions where seismic activity with an intensity of more than 7 points is possible, is carried out in accordance with the supplementary requirements set forth in specified Construction Norms and Regulations. However, the selection of seismic activity with an intensity of 7 points as the initial (calculated) point of application of the supplementary requirements seems to the authors to be unfounded. They arrive at the conclusion that underground pipelines outside zones of ground breakage can sufficiently well withstand seismic activity with an intensity of up to 9 points, and that in the planning of underground steel pipelines, the special requirements should be applied only in sectors where the calculated seismic activity comprises 9 points and more. The seismic resistance of surface pipelines is determined by the seismic resistance of the support structures and the reliability of attachment of the pipes to the support. In seismic regions, surface pipelines should whenever possible be avoided, and should be replaced by underground pipelines. When on the basis of construction conditions it is impossible to replace the surface laying of pipe-

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002201210011-1"

USSR

GEKHMAN, A.S., et al, Stroitel'stvo Trubuprovodov, No 5, May 1971, pp 34-36

lines with the underground laying of them, the requirements of the appropriate Construction Norms And Regulations should be applied even for seismic activity of 7 points, but account should be taken of the possibility of lowering these standards due to the possibility of the functioning of pipelines for certain periods of time under accident conditions. 6 bibliographic entries.

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USSR

UDC 616.988.75+616.2-022.67-078:061.3(47)"1970"

GOLUBEV, D. B., Professor, and KAMFORIN, L. YE., Candidate of Medical Sciences

"Symposium on Express Diagnosis of Influenza and Acute Viral Respiratory Diseases by the Fluorescent Antibody Method"

Moscow, Voprosy Virusologii, No 6, Nov/Dec 71, pp 748-750

Abstract: The symposium was organized by Ministry of Health USSR and the All-Union Scientific Research Institute of Influenza in Leningrad on 13-15 May 1970. Seven long papers and 20 brief communications were presented, including: a review of FA (fluorescent antibody) research and its application in the USSR and abroad, by Prof. A. A. Smorodintsev; a report on the use of the IF (immunofluorescent) method in the diagnosis of influenza and acute respiratory diseases in Leningrad in 1968-1970, by Prof. D. B. Golubev; and a comparative evaluation of FA and cytological methods, by Prof. N. A. Maksimovich. The following recommendations were issued to the Ministry of Health USSR: 1) to specify the dates on which the various medical institutions must introduce IF methods in the diagnosis of acute respiratory diseases; 2) to increase the manufacture of the high-quality ML-3 microscopes, to reduce its price, and to supply it to all polyclinics and hospitals; 3) to manufacture adequate quantitites of standard diagnostic FA preparations; 4) to

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USSR

GOLUBEV, D. B., and KAMFORIN, L. YE., Voprosy Virusologii, No 6, Nov/Dec 71, pp 748-750

manufacture adequate numbers of mercury-quartz lamps; 5) to organize regular training courses in IF methods; and 6) to expand research on improving IF methods of diagnosing acute respiratory diseases.

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KAMFORIN, L. Ye.

JPRS 55178

14 February 1972

SO-JPRS 55178
14 FEB 72

UDC 616.988.73-078.73:576.8.073.4

ACCURACY OF EXPRESS DIAGNOSIS OF INFLUENZA BY THE FLUORESCENT ANTIBODY PROCEDURE

All-(Medicine)

[Article by L. Ye. Kamforin, G.M. Maykovuda, Yu. M. Borshchevskiy, E.A. Zikina, M.A. Medvedeva, Yu. G. Ivannikov, and D.B. Golubev; All-Union Scientific Research Institute of Influenza, USSR Ministry of Health; Moscow, Voprosy Virusologii, No 6, 1971, submitted 30 November 1970, pp 718-721]

Liu first reported in 1956 the application of the fluorescent antibody method to diagnose influenza in humans [6]. Since then much attention has been given to the study of that question.

In the present paper an attempt is made to make clear the accuracy of the immunofluorescent method of diagnosis of influenza in comparison with the possibilities of serological diagnosis.

Material and Methods

The methods of making preparations of fluorescent antibodies and the procedure of immunoluminescent analysis have already been described [1,2,4].

As was shown by Buck and Gart [5], the accuracy of a diagnostic method is composed of its sensitivity S_1 and its specificity S_2. Sensitivity is the probability of making a correct diagnosis in a patient, and specificity is the probability of rejection of disease in a healthy person or a patient with another disease.

A study of the accuracy of the serological method of influenza diagnosis has been made on a group of volunteers on an experimental clinical model of influenza. In that case only those inoculated volunteers who gave a distinct clinical reaction were taken into consideration [1].

The accuracy of the immunofluorescent method was evaluated in the diagnosis of diseases during an epidemic of influenza in parallel with the indicated serological methods. In that case the sensitivity S_1 and specificity S_2

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USSR

KAMILDZHANOV, A. Kh., Uzbek Scientific Research Institute of Sanitation, Hygiene, and Occupational Diseases

"Air Pollution Due to Phosphazole Used in Agriculture Under the Conditions Found in Uzbekistan"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 10, Oct 70, pp 122-123

Abstract: When phosphazole is sprayed onto field in Uzbekistan, it pollutes the air to the extent that the population living close to these fields may be harmed. When a 12-hectare area was treated, the air was polluted up to a distance of 1,000 m; when a 4-hectare area was treated, the air was polluted up to 750 m. Air pollution thus increases with an increase in the area treated. Climatic conditions also have an effect on the extent of the pollution: with increasing atmospheric temperature, the degree of pollution increases.

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USSR K UDC 616.12-008.331.1-039.31-02:/614.8:550.34

PETROVA, N. S., and KAMILOV, F. K., Chair of Internal Diseases, Pediatric Faculty, Tashkent Medical Institute and Tashkent Municipal First Aid Station

"Level of Arterial Pressue and Hypertensive Crises in Inhabitants of Tashkent During the 1966 Earthquake"

Moscow, Terapevticheskiy Arkhiv, No 1, 1970, pp 37-39

Abstract: During the severe tremors that shook Tashkent on 26 April 1966, and for two weeks thereafter, the frequency and severity of hypertensive crises was markedly greater than during the comparable period of the year before, especially among males in the 41-50 year age group. The level of arterial pressure among the young people of Tashkent was appreciably higher during the period of tremors than it was 5-12 months later. However, earthquakes of equal intensity (7 point) later in June, early July, and October of the same year did not significantly increase the incidence of hypertensive crises or alter the usual symptoms, presumably because of the absence of the surprise factor. This is additional evidence for the role of neurogenic factors in the general mechanisms of the pathogensis and dynamics of hypertension.
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USSR UDC: [537.226+537.311.33]: [539.3+536.21+536.631+536.651]

KAMILOV, I. K., ALIYEV, Kh. K., and SHAKHSHAYEV, G. N.

"Free Path Length of Phonons in Solids (Magnetite)"

Sb. nauchn. soobshch. Dagestan. un-t po yestestv. i tekhn. n. (Scientific Reports, Daghestan University of Natural and Technical Sciences--collection of works) 1970, Part 1, pp 55-61 (from RZh-Fizika, No. 11, 1971, Abstract No. 11E820)

Translation: The average free path length of phonons is determined for magnetite from the expression $\lambda = 1/3C \cdot \langle v \rangle \cdot \langle l \rangle$. The thermal conductivity λ and the thermal capacitance C_v are experimentally determined, while $\langle v \rangle$ is found by averaging $3\langle v \rangle^{-3} = v_l^{-3} + 2v_t^{-3}$. Comparison is made with the results obtained from the Leibfried-Schleeman formula for computing three-phonon collisions. It is concluded that the important role in magnetite is played by other dispersion mechanisms producing the small quantity l (of the order of the lattice constant).

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USSR UDC: [537.226+537.311.33] : [537+535]

KAMILOV, I. K.

"Electrical Characteristics of Nickel-Zinc Ferrites"

Sb. nauch. soobshch. Dagestan. un-t. Fizika (Scientific Reports, Daghestan University, Physics--collection of works) No. 1(5), 1970, pp 55-60 (from RZh-Fizika, No. 11, 1971, Abstract No. 11E961)

Translation: The resistivity ρ and the thermal emf coefficient α of polycrystalline ferrites $Ni_{1-x}Zn_xFe_2O_4$ are measured, by the compensation and bridge methods, as functions of their composition and temperature. With changes in x from 0 to 1, ρ drops at room temperature monotonically from $2.54 \cdot 10^4$ to $2.54 \cdot 10^2$ ohm·cm, the energy of activation for ρ drops from 0.31 to 0.21 ev, and α varies from 330 to 170 μV/degree. No anomaly of ρ was detected at the Curie temperature. The possible effects of the secondary phase (FeO) on ρ in the ferrites investigated were discussed.

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USSR

UDC [537.226+537.311.33] : [537+535]

KAMILOV, I. K., MANSUROV, A. M.

"Electrical Characteristics of Mixed Copper-Cadmium Ferrites"

Sb. nauch. soobshch. Dagestan. un-t. Fizika (Scientific Reports, Daghestan University, Physics) No 1(5), 1970, pp 48-54 (from RZh-Fizika, No 11, 1971, Abstract No 11E960)

Translation: The authors measure the resistivity p (from 300 to 550° C) as well as the thermal emf α (up to 220° C) in polycrystalline ferrites $Cu_{1-x}Cd_xFe_2O_4$, where $0.1 < x < 0.7$. At 300° K, $p \simeq (1.2 \text{ to } 5.3) \cdot 10^4$ ohm·cm, and $\alpha \simeq 360$ to 880 μV/degree. The curve for p as a function of the temperature is exponential, with an activation energy of 0.30-0.42 ev and with a break at 130-140° C. With increasing temperatures, α drops. The variations with temperature of the concentration and mobility of the current carriers, computed from p and α, confirm the authors' opinion of the presence of both zone and skip mechanisms of migration in the ferrites. A. A. Samokhvalov

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USSR

KAMILOV, M. M., ADYLOVA, Z. T.

"Successive Reduction in the Number of Characteristics of Objects in the Solution of One Applied Problem"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 50, Tashkent, 1972, pp 65-67 (Translated from Referativnyy Zhurnal, Kibernetika, No 1, 1973, Abstract No 1 V855).

Translation: The problem of compression of the characteristics of a space based on a certain successive procedure of exclusion of characteristics with analysis of the quality of recognition at each iteration is solved.

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USSR UDC 51.155.001.57:681.3.06

KAMILOV, M. M., ALIYEV, E. M., KIM, A. N.

"Calculation of ε-Thresholds in the Recognition of Objects by a Voting Algorithm"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 43, Tashkent, 1971, pp 72-80, (Translated from Referativnyy Zhurnal, Kibernetika, No 10, 1971, Abstract No 10 V831).

NO ABSTRACT.

USSR UDC: 681.3.06:51

AKHMETOV, K. A., BEKMURATOV, T. F., KAMILOV, M. M., SHAMSIYEV, T. G.

"On Optimizing a Technological Process on an Analog-Digital Computer System Using Search Methods"

V sb. Vopr. kibernet. i vychisl. mat. (Problems of Cybernetics and Computer Mathematics--collection of works), vyp. 40, Tashkent, 1970, pp 66-69 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V725)

Translation: The authors investigate an algorithm for optimizing the process of hydrolysis with the aid of an analog-digital computer system. The problem of optimization consists in maximizing the quantity Q of reducing agents throughout the final product (hydrolysate). The algorithm is based on using the method of alternately changing the parameters on which Q depends: x_2 -- vapor flow-rate; x_3 -- water flow-rate; x_4 -- acid flow-rate. Tables are presented for the optimum values in the corresponding units of measurement. It is proposed that the method of statistical (random) search be used to optimize the process on an analog--digital computer system with regard to the real interference acting on the object. V. Mikheyev.

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USSR

BUZURKHANOV, V., KAMILOV, M. M.

"Determination of the Significance of Binary Characteristics of Medical Diagnosis Objects by the Boolean Difference Method"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 51, Tashkent, 1972, pp 66-77 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V714, by the authors).

Translation: The authors develop and generalize an approach which they suggested earlier to estimation of measures of importance of characteristics, based on the Boolean differences of particular functions, and check it in an experiment involving differentiation of chronic gastric diseases.

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USSR

KAMILOV. M. M.

"The PRASK-1 Program Recognition Complex"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 51, Tashkent, 1972, pp 63-65 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V701, by the author).

Translation: The basic functional sections of the program recognition complex (PRASK-1) allowing problems arising in recognition of complex objects to be solved are described.

USSR

KAMILOV, M. M., YUNUSOV, R.

"Search for the Optimal Value of the ε Threshold in the Refinement of Subdivisions"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 51, Tashkent, 1972, pp 78-81 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V710, by the authors).

Translation: Selection of the optimal value of the ε threshold in refinement of subdivisions produced using taxonomy algorithms, it is suggested, can be performed using aerational local search procedures in a grid. An example of realization of a search system for the two-dimensional case is presented.

USSR UDC: 8.74

ZHURAVLEV, Yu. I., KAMILOV, M. M., and TULYAGANOV, Sh. Ye.

"Calculation Procedures for Determining the Informational Weight of a Symbol by Selection"

Tashkent, V sb. Vopr. kibernetiki (Cybernetic Problems--collection of works) No 45, 1971, pp 120-125 (from RZh--Matematika, No 7, 1972, Abstract No 7V649)

Translation: The following problem is solved: Suppose we are given a table T_{nml} of objects for recognition, where n is the number of symbol-columns, m is the number of object-lines, and l is the number of classes. We are required to determine the informational weight (the measure of importance) of the symbols in such a table. A sequence of stages is described for determining the informational weight of a symbol by selection algorithms, and the complexity of the calculation procedures then realized is evaluated from the point of view of the number of operations. Evaluation of the time for solving the problem on the "M-220" and the "MESM-6" electronic computers are given. V. Mikheyev

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USSR

UDC 8.74

ZHURAVLEV, YU. I., KAMILOV, M. M., TULYAGANOV, SH. YE.

"Computation Procedures for Determining the Information Weight of an Attribute by Voting Algorithms"

V sb. Vopr. kibernetiki (Problems of Cybernetics -- collection of works), Vyp. 45, Tashkent, 1971, pp 120-125 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V649)

Translation: The following problem is solved. Let a table of patterns for recognition $T_{nm\ell}$ be given (n is the number of column attributes, m is the number of object rows, ℓ is the number of classes). It is necessary to determine the information weight (the measure of importance) of the attributes of this table. The series of steps for determining the information weight of the attribute by voting algorithms is described, and the complexity of the computation procedures from the point of view of the number of operations is estimated. Estimates are presented for the solution time of the problem on the M-220 and BESM-6 computers.

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USSR

UDC: 8.74

KAMILOV, M. M.

"System of Models of Algorithms for Computing Estimates"

V sb. Vopr. kibernetiki (Problems of Cybernetics--collection of works), vyp. 46, Tashkent, 1971(1972), pp 68-73 (from RZh-Kibernetika, No 6, Jun 72, Abstract No 6V575)

[No abstract]

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USSR

UDC: 8.74

KAMILOV, M. M., ALIYEV, E. M.

"Criterion of Operating Effectiveness of a Polling Algorithm and its Evaluation"

V sb. Vopr. kibernetiki (Problems of Cybernetics--collection of works), vyp. 45, Tashkent, 1971, pp 126-131 (from RZh-Kibernetika, No 5, May 72, Abstract No 5V558)

[No abstract]

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USSR

ZHURAVLEV, Yu. I., KAMILOV, M. M., TULYAGANOV, Sh. Ye.

"Formulas for Calculation of Measures of Importance of a Characteristic"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 44, Tashkent, 1971, pp 15-20, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract No 3 V577 by V. Mikheyev).

Translation: Formulas are studied for calculation of the measure of importance of an individual characteristic (P_i) for tables of objects of recognition T_{nml} (n is the number of characteristic columns, m is the number of object rows, l is the number of classes). Analysis shows that the primary difficulty in the determination of P_i from the standpoint of the number of computations is related to calculation of the number of votes. It is demonstrated using a number of theorems that in the class of voting algorithms, an effective and simple apparatus can be constructed for calculation of the number of votes and, correspondingly, for the production of P_i. This apparatus is constructed not only for binary tables but for tables of objects fixed by characteristics from a certain arbitrary numerical alphabet.

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USSR

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002201210011-1"

USSR

KAMILOV, M. M., ALIYEV, E. M.

"Selection of Length of Voting Sets in Algorithms for Calculation of Estimates"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 44, Tashkent, 1971, pp 162-165, (Translated from Referativnyy Zhurnal, Kibernetika, No 2, 1972, Abstract No 2 V746 by V. Mikheyev).

Translation: A method is described for determination of the length of voting sets in algorithms for calculation of estimates in which the length is selected on the basis of the similarity of objects within a class and determination of the mean number of corresponding columns with respect to rows of one and all fixed classes in a table of recognition objects. It is noted that the method suggested can be used for large tables of objects, fixed by characteristics of an arbitrary alphabet.

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USSR

BUZURKHANOV, V., KAMILOV, M. M., KIM, A. N.

"Measures of Importance of Binary Characteristics"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], Tashkent, No 44, 1971, pp 9-14 (Translated from Referativnyy Zhurnal, Kibernetika, No 2, 1972, Abstract No 2 V394 by V. Mikheyev).

Translation: The following problem is studied. Given are objects characterized by a set of values of binary characteristics. We must determine which of these characteristics are essential and which are secondary. A method is suggested using the Boolean difference of the partial functions. An algorithm is described for calculation of an estimate of the measure of importance of an individual characteristic.

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USSR

UDC 633.51:631.524.86

MIRPULATOVA, N. S., KAMILOVA, M. Kh., RYSBAYEVA, A. S., NAGORNAYA, N. M., and TESHABEYEVA, R., Scientific Research Institute of Plant Protection, All Union Academy of Agricultural Sciences imeni V. I. Lenin

"Maintaining Resistance to Verticillium Wilt in Cotton Strains"

Moscow, Selektsiya i Semenovodstvo, No 5, Sep/Oct 71, pp 12-15

Abstract: Verticillium dahliae grows readily in the soil of Uzbekistan and destroys large amounts of cotton. To bring the situation under control, wilt-resistant cotton strains should be grown on threatened fields. On cotton farms, the sowing of cotton should alternate with the sowing of alfalfa, which is resistant to this fungus and inhibits its growth. After harvest, the fields should be cleared of all residual weeds to prevent proliferation of the fungus. All instructions on fertilization should be strictly observed to harvest healthier, more resistant seeds. Similarly, sprays should be applied at the right time (which varies for the various strains of cotton). Before seeds are collected, all wilted plants should be removed from the field. To prevent infection during transport, all

USSR

MIRPULATOVA, N. S., et al., Selektsiya i Semenovodstvo, No 5, Sep/Oct 71, pp 12-15

seeds must be pretreated prior to shipment. All waste material must be burned, and the highest sanitary standards should be enforced on cotton farms.

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USSR

(2)

UDC 632.95

TULYAGANOV, S. R., ALIMOV, E., KHASANOV, S. A., KHIKMATOV, A., KAMILOVA, R. M., and RAKHIMOV, A. A., Institute of the Chemistry of Plant Materials, Academy of Sciences Uzbek SSR; and Institute of Experimental Biology of Plants, Academy of Sciences Uzbek SSR

"Herbicides"

USSR Author's Certificate kl. [expansion unknown] A 01 n 9/02, No 338, 207, Filed 14 Oct 70, Published 12 June 72 (from Referativnyy Zhurnal -- Khimiya, No 7, 1973, Abstract No 7N695 by T. A. Belyayeva)

Translation: To control weeds during the planting of cotton, it was suggested to use phenyl compounds such as $PhN(COMe)CH_2CH_2OC_6H_4Cl$-4 (I) which have the active groups β-acetoxyethylaceanilide and p-ClC_6H_4OH. Compound (I) is almost completely lethal to amaranth and purslane in doses of 10 Kg/Lectare but is not toxic to the cotton.

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USSR

UDC 632.95

KAMILOVA, R. M., KHIKMATOV, A., RAKHIMOV, A. A., MAKHSUMOV, A. G., SAFAYEV, A., MIRZABAYEV, E. A.

"Herbicide"

USSR Author's Certificate No 336006, filed 7 Oct 69, published 22 May 72 (from RZh-Khimiya, No 5 (II), 1973, Abstract No 5N653)

Translation: A compound 2,5-diphenylthiophene (I) is proposed to control weeds in planted fields. In a dosage of 2-3 kg/hectare, I exhibits a herbicidal activity with respect to Shiritsa, Japanese barnyard millet, datura and partulak without damaging cotton.

1/1

USSR

UDC 632.96

KAMILOVA, R. M., KHIKMATOVA, A., MAYOROV, S. A., MAKHSUMOV, A. G., SAFAYEV, A., and MIRZABAYEV, E. A.

"A Herbicide"

USSR Author's Certificate No 324025, filed 7 Oct 69, published 18 Feb 72 (from RZh-Khimiya, No 22, Nov 72, Abstract No 22N489 P)

Translation: It is proposed that 2,5-bis-(2,4,6-triiodophenoxymethyl) thiophene (I) be used as a high-quality herbicide. Pregermination treatment with compound I in a dose of 10 kilograms per hectare killed 100% of the weeds, (purslane, barnyard millet) without damage to cotton. T. A. Belyayeva.

1/1

USSR

UDC 621.165.1:532.5.031

KAMINER, A. A., NASTENKO, N. Ya., (Kiev)

"The Problem of Modeling the Process of Flow Around the Blades of Turbines in Studying the Oscillations of Flat Blades"

Kiev, Problemy Prochnosti, No 8, 1972, pp 116-118.

Abstract: A device is suggested allowing the rotating blade wheel of a moving turbine blade set to be modeled. The device consists of a driven roller chain on two sprockets. The turbine blades being studied are mounted on the chain and moved past the stationary blade set by a motor which drives one of the two sprocket wheels. As the blades pass through the horizontal sectors where they are exposed to the moving fluid stream, they are maintained in straight-line motion by horizontal guides which support the chain.

1/1

USSR UDC: 533.6:534.1

KAMINER, A. A.

"A Study of Aerodynamic Damping When Turbine Blades Oscillate in Air Flows"

V sb. Rasseyaniye energii pri kolebaniyakh mekh. sistem (Energy Dissipation in Oscillations of Mechanical Systems--collection of works), Kiev, "Nauk. dumka", 1970, pp 247-251 (from RZh-Mekhanika, No 4, Apr 71, Abstract No 4V247)

Translation: The article is a report on development of an installation at the Institute of Strength Problems, Academy of Sciences of the Ukrainian SSR for studying damping of turbine blade oscillations in air flows at subsonic, near-sonic and supersonic speeds. It is noted that this installation can be used to study the effect which the rate of flow, angle of attack, resonance frequency, amplitude of the oscillations, shape and mode of the oscillations, phase displacement of oscillations between adjacent blades, and geometry of the foil and guide vanes have on aerodynamic damping. The logarithmic decrement δ_{ae} associated with the aerodynamic action of the flow is introduced for the characteristic of aerodynamic damping.

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KAMINER, A. A., Rasseyaniye energii pri kolebaniyakh mekh. sistem, Kiev, "Nauk. dumka", 1970, pp 247-251

The decrement δ_{ae} was determined from the change in amplitude of resonance oscillations of the system as a consequence of the change in flow rate. It is assumed that this change in amplitude is due either to a change in the frequency of the resonance mode of the oscillations, or to the action of the flow (in the absence of energy absorption). A formula is presented for determining the logarithmic decrement of aerodynamic damping

$$\delta_{ae} = \delta_{m_{w.f}}\left(\frac{A_{w.f}}{A_f} - \frac{\delta_{m_f}}{\delta_{m_{w.f}}}\right)$$

where $A_{w.f}$ is the amplitude of the resonance oscillations without flow, A_f is the amplitude of resonance oscillations in the presence of flow, $\delta_{m_{w.f}}$ is the logarithmic decrement of attenuation corresponding to amplitude $A_{w.f}$, and δ_{m_f} is the logarithmic decrement of attenuation corresponding to amplitude A_f. A diagram of the installation is given together with a brief description of the equipment and instruments used. P. Vakhomchik.

2/2

Hydraulic & Pneumatic

UDC 533.6.013.42

USSR

KAMINER, A. A., KAVITSKIY, B. M., CHEMERIS, A. N.

"Experimental Study of Vibrations of Rod Systems in a Water Flow"

V sb. Rasseyaniye energii pri kolebaniyakh mekh. sistem (Energy Scattering in the Oscillations of Mechanical Systems -- Collection of Works), Kiev, "Nauk. dumka", 1972, pp 310-316 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V405)

Translation: A device is described for studying the hydrodynamic damping and excitation of rod systems (blades, supports) in a water flow that was developed at the Institute of Strength Problems of the Academy of Sciences UkrSSR. A closed wind tunnel with a closed working chamber of cross section 300 × 155 mm and a transparent wall for observing the model was used in producing the flow. The flow rate is regulated within limits up to 20 m/sec by a smooth change in the number of revolutions of the drive. Systems for the excitation and recording of plane-parallel oscillations of the model in the flow are described. The model is put into motion with a given frequency with the aid of electromagnets placed under the working area of the tunnel.

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USSR

KAMINER, A. A., et al, Rasseyaniye energii pri kolebaniyakh mekh. sistem, Kiev, "Nauk. dumka", 1972, pp 310-316

The design of the fastening elements of the model makes it possible to obtain the desired angles of attack. The change in natural frequencies and decrements with a change in the flow velocity is investigated in modes of resonance and damping of the oscillations. The results of the study are not given in the paper. K. G. Kravtsov.

USSR

UDC 629.7.036.3-226.001.4

KAMINER, A. A. and NASTENKO, N. YA.

"A Procedure for Investigating the Aerodynamic Damping of Turbomachine-Blade Oscillations in Airstreams, for Oscillations of Diverse Kinds"

Kiev, Rasseyaniye Energii pri Kolebaniyakh Mekh. Sistem--Sbornik (Energy Dispersion During Oscillations of Mechanical Systems--Collection of Works), Naukova Dumka, 1972, pp 298-304 (from Referativnyy Zhurnal--Aviatsionnye i Raketnyye Dvigateli, No 2, 1973, Abstract No 2.34.51. Resume)

Translation: In the Institute of Strength Problems, Academy of Sciences, Ukrainian SSR, systems have been developed which permit the conduct of an investigation of the aerodynamic damping of turbomachine blades within a wide range of oscillation frequencies and amplitudes. The use of these systems permits unique ascertainment of the influence, upon aerodynamic damping, of each of the factors that determine the process of turbomachine-blade oscillation in airstreams with the corresponding oscillation types, and also permits research on profiles of diverse configurations and dimensions at identical values of resonance-oscillation parameters and flow-regime parameters. The results of the investigation can be extended to the case of cantilever structures that have analogous geometric cross section dimensions, and which achieve resonance oscillations of the corresponding type with respect to any

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USSR

KAMINER, A. A. and NASTENKO, N. YA., Rasseyaniye Energii pri Kolebaniyakh Mekh. Sistem--Sbornik, 1972, pp 298-304

of the forms. A brief description is presented of the procedure and system for excitation of the oscillations. 4 figures. 6 references.

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USSR

UDC 533.6.013.42

KAMINER, A. A., NASTENKO, N. Ya., CHEMERIS, A. S.

"Experimental Study of the Effect of the Distance Between the Axes of the Centers of Gravity and Rigidity of the Profile on the Occurrence of Flexible Oscillations Applicable to Turbine Blades"

V sb. Rasseyaniye energii pri kolebaniyakh mekh. sistem (Energy Scattering Under Oscillations of Mechanical Systems -- Collection of Works), Kiev, "Nauk. dumka", 1972, pp 317-320 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V374)

Translation: An experimental study of the effect of the distance between the axes of the center of gravity and the rigidity on the occurrence of flexing oscillations of profiles in an air flow were conducted. Both an isolated profile and a profile of a plane lattice were investigated. Special samples were made for this purpose, in each of the cross sections of which the axes of the foci, the centers of gravity, and the rigidity were combined at one point or shifted by a distance of the order of 0.25 of the chord length of the profile. In the course of the experiment the flexing rigidity of the oscillatory system (profile) and the frequency of its natural oscillations varied. The flexing (translational) oscillations of the profiles were excited

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USSR

KAMINER, A. A., et al, Rasseyaniye energii pri kolebaniyakh mekh. sistem, Kiev, "Nauk. dumka", 1972, pp 317-320

with an electromagnet. The effect of the indicated interaxial distance on the aerodynamic damping and excitation of oscillations was investigated as a function of the dynamic characteristics of the flow, Strouhal number, geometric characteristics of the profile and lattice, and the angle of attack. Limits for the change in these parameters and a method for establishing them are given. It is shown that the change in the interaxial distance between the centers of gravity and rigidity of the profiles has an inconsiderable effect on the course of flexing oscillations, which can be neglected. V. P. Vakhomchik.

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USSR UDC 621.165.1:532.5.031

KAMINER, A. A., NASTENKO, N. Ye., Kiev

"Method of Studying Oscillations of Flat Turbine Machine Grids in High Temperature Gas Streams"

Kiev, Problemy Prochnosti, No 5, May, 1971, pp 111-113.

Abstract: An installation is described allowing the oscillations of turbine machine blades to be studied in subsonic, transsonic and supersonic high temperature air streams considering the parameters of the stream, oscillating system, aerodynamic characteristics of the profile and geometric parameters of the grid.

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3

AA0030210 Kaminer, B.S. UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General, Derwent, 10/69

232475 BLOOD TRANSFUSION APPARATUS including rolle pump with roller drive mechanism, electric motor with reducer, roller speed regulator, and automatic cut-out, differing in that it has a transparent cylindrical glass 11 with a conical surface 14 inside, and on its outer surface there is a channel to hold the tube 10 of the roller pump. This gives a convenient grip of this tube and improves visual control of the pump's functioning. There is a tachogenerator with a voltmeter connected to the pump rotor to to meter the blood flow. The electric motor's actuating circuit has a phasogenerator to allow smooth control of the rotor pump's rotation. It also has a double by-pass sleeve with two half-sleeves linked with the pumo rotor, which rotate in opposite directions and with different speeds to allow the speed of the reducer to be altered. 24.11.66. as 1114140/31-16.
S.M."Kirov" Military Medical Acad. (2.4.69.)
Bul.1/11.12.68. Class 30.k. Int.Cl. A61m.

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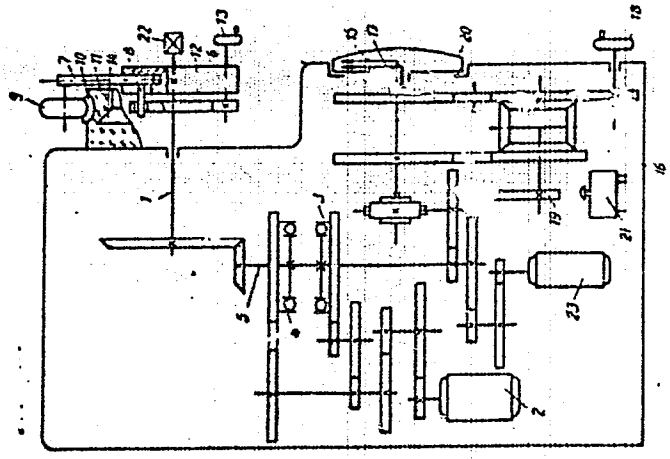
1/3

19690028

AA0030210



2/3

19690029

AA0030210

Author: V. Yu. Klur, G. K. Konkolovich, I. S. Kolesnikov, A. S. Malyshev, B. S. Kaminer, K. S. Ivanova, O. P. Buts

Fac: Voyenno-Meditsinskaya Ordena Lenina Akademiya Im. S. M. Kirova

19690030

3/3

USSR

UDC: 621.384.639

ABROSIMOV, N. K., ALKHAZOV, D. G., DMITRIYEV, S. P., YELISEYEV, V. A., KANTSKER, D. M., KULIKOV, A. V., MIRONOV, Yu. T., MIKHEYEV, G. F., RYABOV, G. A., CHERNOV, N. N., SHALMANOV, V. I., KOMAR, Ye. G., MALYSHEV, I. F., MONOSZON, I. A., PEREGUD, V. I., ROZHDESTVENSKIY, B. V., ROYFE, I. M., SEREDENKO, Ye. V., Physicotechnical Institute imeni A. F. Ioffe, Academy of Sciences of the USSR, Leningrad, Scientific Research Institute of Electrophysical Equipment imeni D. V. Yefremov, Leningrad

"The Leningrad Synchrocyclotron for a Proton Energy of 1 GeV"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 41, No 9, Sep 71, pp 1769-1775

Abstract: The paper describes the synchrocyclotron at the Physicotechnical Institute imeni A. F. Ioffe of the Academy of Sciences of the USSR for a proton energy of 1 GeV. Proton beam parameters as well as the characteristics of the main systems of the accelerator are presented. The beam channels are described, and the layout of the accelerator building is given. The installation has been in successful operation since 1970. Three tables, two figures, bibliography of twelve titles.

1/1

USSR

UDC 543.544:535.243.082

KAMINIR, L. B., KREYNDLIN, E. YA., UNDRITSOV, I. M.

"Densitometer for Chromatographic Analysis of Minute Amounts of Substances"

Dokl. Vses. soveshch. Optich. i titrometrich. analizatory zhidk. sred, 1971, Ch 1 (Reports of the All-Union Conference on Optical and Titrometric Analyzers of Liquid Media, 1971, Part 2), Tbilisi, 1971, pp 260-266 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 3, Mar 72, Abstract No 3.32.1122)

Translation: When studying the structure of substances using small samples by chromotographic methods, flow densitometers can be successfully used as the detectors. Decreasing the column size and using small analyzable samples noticeably increase the chromatographic separation rate (0.5-3 hours instead of 10-40 hours) and permit the components to be analyzed on a subnanomolar level (10^{-7}-10^{-8} grams); that is, the sensitivity of the method approaches the sensitivity of radio isotopic analyses and permits clear recording of the peak eluated with small volumetric intervals. The functional schematic of the newly developed densitometer equipped with the EPP-09-51 potentiometer and used as a detector is presented. The magnitude of the measurable optical density is proportional to the light absorption in the specimen with an error not exceeding 6.5%. It is pointed out that in order to determine the amount of substance with respect to area of the curve on the chromatogram, such errors are admissible. There are 2 illustrations and a 6-entry bibliography.

1/1

Molecular Physics

USSR UDC 539.182+539.184.01

STASIUKAITIS, V. J., KAMINSKAS, V. A., and JUCYS, A. P., Institute of Physics and Mathematics of the Academy of Sciences Lithuanian SSR, Vil'nyus State Pedagogical Institute

"Application of the Extended Method of Calculation and Multiconfigurational Approximation to the Configuration $3d^3$ of Sc I and V III"

Vil'nyus, Litovskiy Fizicheskiy Sbornik, Vol 12, No 6, 1972, pp 903-909

Abstract: Of the refined atomic theory methods, the easiest to use are the multiconfigurational approximation (MCA) and the extended method of calculation (EMC). The present article combines the two methods in the case of the configuration $1s^22s^22p^63s^23p^63d^3$. Concrete calculations are performed for Sc I and V III. Since the authors are interested mainly in only the 3d-electron shell, the ordinary method of calculation (OMC) is used for all inner shells, and both EMC and MCA are used for the 3d-electron shell. For the inner electrons Hartree-Fock analytic radial orbitals are used for both the ground configuration and the correction configurations. The results obtained in OMC, EMC, MCA, and EMC plus MCA (EMC MCA) are also given for comparison.

1/2

USSR

STASIUKAITIS, V. J., et al., Litovskiy Fizicheskiy Sbornik, Vol 12, No 6, 1972, pp 903-909

The correction configurations used are $3d^24s$, $3d4p^2$, and $3d4f^2$. In the case of MCA (without EMC) the configuration $3d4d^2$ is also included; it no longer occurs in the case of EMC MCA, since it represents merely the radial correlation which is considered by EMC. Theoretical results are compared with experimental data.

2/2

KAMINSKAYA, A.M.

(11)

AEC/UCRL TRANS-1489

UCRL-Trans-1489

STABILITY OF A SCATTERED RING ON DISPLACEMENT OF ITS CENTER

V.M. Zhabitskiy, I.A. Zolina, A.M. Kaminskaya, I.N. Ivanov and E.A. Perelstein

Translated from
Preprint JINR-P9-6514, dated June 1972

Translated by: Addis Translations
October 1972

University of California
Lawrence Berkeley Laboratory
Berkeley, California

USSR

UDC 575.24

ROKITSKIY, P. F., MOSSE, I. B., [redacted], and FREYMANIS, Ya. F.

"Study of the Protective Effect of Indene Compounds Against the Genetic Effect of Ionizing Radiations"

Minsk, Voprosy Genetiki i Selektsii (Aspects of Genetics and Selection), "Nauka i Tekhnika," Minsk, 1970, pp 303-304

Translation: The protective properties of aminated indenes specially synthesized at the Institute of Organic Synthesis of the Academy of Sciences Latvian SSR were investigated. It was established that seven of the compounds reduce the frequency of recessive lethal mutations induced in Drosophila by gamma-irradiation by 50-80 percent, and that five of the compounds diminish the level of chromosome reconstructions induced by X-ray irradiation by 50-75 percent.

Certain differences in the protective capacity of the indene preparations when used in combination with normal X-rays and high energy radiation were noted; for example, at a relatively high degree of protection from X-ray irradiation (180 kilovolts) the protective effectiveness of the preparations is reduced

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USSR

ROKITSKIY, P. F., Voprosy Genetiki i Selektsii (Aspects of Genetics and Selection), "Nauka i Tekhnika," Minsk, 1970, pp 303-304

during X-ray bremsstrahlung and is completely absent in most of the indene compounds in irradiation with electrons with an energy of 42 Mev. The possible mechanisms of the genetic effect of the preparations studied are discussed.

2/2

USSR UDC 575.595.773.4

KAMINSKAYA, E. A., MASE, I. B., and FREYMANIS, Ya. F.

"Effect of Indene Preparations on the Genetic Effect of Different Energy Radiations"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Biologicheskikh Nauk, No 1, 1971, pp 42-46

Abstract: The hypothesis that the protective capacity of indene preparations with respect to genetic disorders induced by high-energy radiation is inversely proportional to the increase in the ion density of radiation was tested. Drosophila melanogaster was irradiated with x-rays and electrons with energies of 42 Mev. Five indene preparations known as F-38, F-11, F-44, F-25, and AV-69 were applied in maximum concentrations not affecting the normal development of Drosophila. Two tests were carried out, test one to establish the frequency of recessive sex linkage with lethal mutations, and test two -- to determine the frequency of chromosome aberrations. The results of the tests established

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USSR

KAMINSKAYA, E. A., MASE, I. B. and FREYMANIS, Ya. F., Izvestiya Akademii Nauk BSSR, Seriya Biologicheskikh Nauk, No 1, 1971, pp 42-46

that, contrary to claims in the literature, the protective effectiveness of indene preparations decreases when radiation energy is increased, while increased sensitivity is manifested in some cases.

USSR

UDC 547.63 + 547.562.4'562.1

GITIS, S. S., SEINA, Z. N., KAMINSKAYA, E. G., IVANOVA, V. M., BELOBRAGINA, V. V., SOSONKIN, I. M., and KANIEVSKIY, A. YA., VNIPIM [All-Union Scientific Research and Planning Institute of (unknown; possibly Monomers)], Tula, and CHIKURINA, L. V., VNIIV [All-Union Scientific Research Institute of Synthetic Fibers]

"p,p'-Bis-(carboxyphenylsulfonyl)-diphenyl Oxide and Some of Its Derivatives -- Monomers for the Production of Thermostable Fibers"

Moscow, Khimicheskiye Volokna, No 1, 1971, pp 45-47

Abstract: The article suggests the synthesis of new monomers, viz. derivatives of p,p'-bis-(carboxyphenylsulfonyl)-diphenyl oxide, for the production of thermostable polymer materials. A study of the first stage of the synthesis -- tosylation of diphenyl ether -- showed that the process yields two principal products whose elementary composition corresponds to the general formula $CH_3-Ar-SO_2-Ar-O-Ar-SO_2-Ar-CH_3$, as well as a third substance whose composition corresponds to the composition

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USSR

GITIS, S. S., et al., Khimicheskiye Volokna, No 1, 1971, pp 45-47

of the monotosylation product $Ar-O-Ar-SO_2-Ar-CH_3$. The structure of the synthesized products was confirmed by IR and electron spectroscopy, as well as polarography. Fibers based on the resultant monomers are strong and elastic.

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Acc. Nr: AP0036829 Ref. Code: UR 0016

PRIMARY SOURCE: Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, 1970, Nr 1, pp 123-126

TYPES AND VIRULENCE OF HEMOLYTIC STREPTOCOCCI ISOLATED FROM SCARLET FEVER PATIENTS

Gladkova, K. K.; Strel'tsova, N. A.; Cherkasskaya, R. S.; Kaminskaya, E. I.; Fiks, L. I.

The type composition of hemolytic streptococci isolated from scarlet fever patients in 1966—1968 are presented. Of the typed strains, 134 (49%) belonged to type 4, and 63 (22.0%) — to type 1. The percentage of M-containing strains among the most widespread types of streptococci (4 and 1) was 68. The greatest number of M-containing cultures (77%) was revealed among the strains belonging to type 4, which was the «leading» during the period under study.

D.N.

REEL/FRAME 19721746

6

1/2 012 UNCLASSIFIED

TITLE--SELF ADJUSTING GOLD RUBY GLASS -U-

PROCESSING DATE--30OCT70

AUTHOR-(03)-KAMINSKAYA, N.L., SHMELEVA, N.A., LAZAREVA, V.P.

COUNTRY OF INFO--USSR

SOURCE--STEKLO KERAM. 1970, 27(3), 16-19

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--RUBY, GLASS COMPOSITION, GOLD, TIN OXIDE, ANTIMONY COMPOUND, OXIDE GLASS, SELENIUM, SODIUM NITRATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1651

STEP NO--UR/0072/70/027/003/0016/0019

CIRC ACCESSION NO--AP0125273

UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125273

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SELF ADJUSTING RUBY GLASS OF THE CHEM. COMPN. SIO SUB2 57-60, PBO 19, K SUB2 O 15-18, NA SUB2 O 2, B SUB2 O SUB3 2-3, ZNO 1, SNO 0-0.04, SB SUB2 O SUB3 0.01-0.02, AND AU 0.005-0.04PERCENT WAS PREPD. THE SELF ADJUSTING EFFECT WAS ATTAINED BY INTRODUCING 0.3-0.75 G SE AND (OR) 0.05-0.2 KG NANO SUB3 AND (OR) NAF TO 100 KG GLASS BATCH AT THE END OF ITS MELTING. THE SE:NANO SUB3:NAF RATIO HAD AN EFFECT ON THE TINT OF RUBY GLASS. FACILITY: LENINGRAD. ZAVDO KHUDOZHESTV. ATEKLA, LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC 621.372.823.09

DIDENKO, A. N., KAMINSKAYA, R. G.

"Study of the Dispersion Properties of Iris Wave Guides of Elliptic Cross Section"

Moscow, Radiotekhnika i elektronika, Vol XVII, No 2, 1972, pp 399-402

Abstract: The problem of wave propagation in an elliptic iris wave guide is investigated. The equations for the elliptic wave guide are derived, and results are presented from an experimental study of the wave guide. The type of oscillation was determined by the frequency drift of small disturbing bodies. The calculated and experimental delay factors as functions of the wavelength for even E_{01} and H_{01} waves are presented. Good agreement is obtained. The electrodynamic characteristics of iris wave guides of elliptic and round cross section are compared in a table. The efficiency of an elliptic wave guide accelerating system approaches the efficiency of a circular wave guide with a coupling opening equal to the minor halfaxis, and the operating pass band is appreciably higher. Execution of additional spurious oscillations in the elliptic iris wave guide by comparison with the round wave guide was observed in the higher frequency range, but they do not affect the acceleration process.

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1/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--OPTICAL STUDY OF THE DESTRUCTION OF A GLASS FIBER DURING ALKALINE TREATMENT -U-

AUTHOR-(03)-MAZO, E.E., KAMINSKAYA, V.S., SHARAY, V.N.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK BELORUSS. SSR 1970, 14(3), 226-9

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--GLASS FIBER, BOROSILICATE GLASS, SOLUTION ALKALINITY, ZIRCONIUM OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1139 STEP NO--UR/0250/70/014/003/0226/0229

CIRC ACCESSION NO--AT0119993

UNCLASSIFIED

2/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70
CIRC ACCESSION NO--AT0119993
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FIBERS OF GALSS CONTG. 14PERCENT AND 8.5PERCENT ZRO SUB2 AND OF ALKALI FREE ALUMINOBOROSILICATE GLASS WERE EXPOSED TO 2, 4, AND 6 N NAOH FOR 2-112 HR AND THEN EXAMD. UNDER THE MICROSCOPE. THE ALKALI RESISTANCE INCREASES WITH THE ZRO SUB2 CONTENT. THE REACTION PROCESS CONSISTS OF HYDRATION, SURFACE LAYER DESTRUCTION, AND THE FORMATION OF AN INTERMEDIATE LAYER.
FACILITY: INST. OBSHCH. NEORG. KHIM., MINSK, USSR.

UNCLASSIFIED

USSR

UDC 621.355.8.035.2

KAMINSKAYA, YE. A., UFLYAND, N. YU., and ROZENTSVEYG, S. A.

"The Influence of Increased Temperature on the Behavior of Nickel Oxide Electrodes"

Sb. rabot no khim. istochnikam toka. Vses. n.-n akkumulyator. in-t (Collection of Works on the Chemical Source of Current. All-Union Scientific Study Institute for Storage Batteries) Vyp 7, 1972, pp 107-112 (from Referativnyy Zhurnal -- Khimiya No 8(II), 1973, Abstract No 8I234 by V. S. Levinson)

Translation: A study was made of the influence of temperature in the region 20-80°C on the processes occuring in nickel oxide electrodes of metallo-ceramic construction and containing beta and gamma NiOOH. During an increase in temperature from 20° to 50-80°, the coefficient of the utilization of the charging current decreased, especially if the charging voltage at the increased temperature resulted from the discharge at that same temperature. The electrode was discharged deeper and consequently, its strength was increased. The decrease in the strength of the electrode during alternations of high temperature and normal temperature cycles was significantly reduced. After storage at a higher temperature, the depth of discharge of the electrode increased. The presence in hermatically sealed NiCd batteries of excess

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USSR

KAMINSKAYA, YE. A., et al., Sb. rabot no khim. istochnikam toka. Vses. n.-n akkumulyator. in-t, Vyp 7, 1972, pp 107-112

metallic Cd providing a greater depth of discharge of the nickel oxide electrode leads to an improvement in the characteristics of the battery, intended for use under high temperature conditions.

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